

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-44 (Cancelled).

45. (Previously Presented) A thermoplastic material comprising:

(a) 5% by weight to 95% by weight of a vulcanized rubber in a subdivided form;

(b) 5% by weight to 95% by weight of at least one heterophase copolymer comprising a thermoplastic phase made from a propylene homopolymer or copolymer and an elastomeric phase made from a copolymer of ethylene with an α -olefin; and

(c) 0% by weight to 90% by weight of at least one α -olefin homopolymer or copolymer different from (b);

the amounts of (a), (b) and (c) being expressed with respect to the total weight of (a) + (b) + (c).

46. (Previously Presented) The thermoplastic material according to claim 45, wherein the vulcanized rubber in a subdivided form (a) is present in an amount of 10% by weight to 60% by weight with respect to the total weight of (a) + (b) + (c).

47. (Previously Presented) The thermoplastic material according to claim 45, wherein the heterophase copolymer (b) is present in an amount of 40% by weight to 90% by weight with respect to the total weight of (a) + (b) + (c).

48. (Previously Presented) The thermoplastic material according to claim 45, wherein the α -olefin homopolymer or copolymer (c), is present in an amount of 0% by weight to 50% by weight with respect to the total weight of (a) + (b) + (c).

49. (Previously Presented) The thermoplastic material according to claim 45, wherein, the vulcanized rubber in a subdivided form (a) has a particle size not higher than 10 mm.

50. (Previously Presented) The thermoplastic material according to claim 49, wherein, the vulcanized rubber in a subdivided form (a) has a particle size not higher than 5 mm.

51. (Previously Presented) The thermoplastic material according to claim 45, wherein the vulcanized rubber in a subdivided form (a) has a particle size not higher than 0.6 mm.

52. (Previously Presented) The thermoplastic material according to claim 51, wherein the vulcanized rubber in a subdivided form (a) has a particle size not higher than 0.5 mm.

53. (Previously Presented) The thermoplastic material according to claim 52, wherein the vulcanized rubber in a subdivided form (a) has a particle size not higher than 0.2 mm.

54. (Previously Presented) The thermoplastic material according to claim 45, wherein the vulcanized rubber in a subdivided form (a) comprises at least one diene elastomeric polymer or copolymer of natural origin or obtained by solution polymerization, emulsion polymerization or gas-phase polymerization of one or more conjugated diolefins, optionally blended with at least one comonomer selected from

monovinylarenes and/or polar comonomers in an amount of not more than 60% by weight.

55. (Previously Presented) The thermoplastic material according to claim 54, wherein the diene elastomeric polymer or copolymer is selected from: cis-1,4-polyisoprene, 3,4-polyisoprene, polybutadiene, optionally halogenated isoprene/isobutene copolymers, 1,3-butadiene/acrylonitrile copolymers, styrene/1,3-butadiene copolymers, styrene/isoprene/1,3-butadiene copolymers, styrene/1,3-butadiene/acrylonitrile copolymers, or mixtures thereof.

56. (Previously Presented) The thermoplastic material according to claim 45, wherein the vulcanized rubber in a subdivided form (a) comprises at least one elastomeric polymer of one or more monoolefins with an olefinic comonomer or derivatives thereof.

57. (Previously Presented) The thermoplastic material according to claim 56, wherein the elastomeric polymer is selected from: ethylene/propylene copolymers (EPR) or ethylene/propylene/diene copolymers (EPDM); polyisobutene; butyl rubbers; halobutyl rubbers, chlorobutyl or bromobutyl rubbers; or mixtures thereof.

58. (Previously Presented) The thermoplastic material according to claim 45, wherein the thermoplastic phase of the heterophase copolymer (b) comprises a propylene homopolymer or a copolymer of propylene with an olefinic comonomer selected from ethylene and α -olefins other than propylene.

59. (Previously Presented) The thermoplastic material according to claim 58, wherein the olefinic comonomer is ethylene.

60. (Previously Presented) The thermoplastic material according to claim 58, wherein the olefinic comonomer is less than 10 mol% relative to the total number of monomer moles in the thermoplastic phase.

61. (Previously Presented) The thermoplastic material according to claim 45, wherein the elastomeric phase of the heterophase copolymer (b) is at least 10% by weight relative to the total weight of the heterophase copolymer.

62. (Previously Presented) The thermoplastic material according to claim 61, wherein the elastomeric phase of the heterophase copolymer (b) is at least 40% by weight relative to the total weight of the heterophase copolymer.

63. (Previously Presented) The thermoplastic material according to claim 62, wherein the elastomeric phase of the heterophase copolymer (b) is at least 60% by weight relative to the total weight of the heterophase copolymer.

64. (Previously Presented) The thermoplastic material according to claim 45, wherein the elastomeric phase of the heterophase copolymer (b) comprises an elastomeric copolymer of ethylene with an α -olefin and optionally with a polyene.

65. (Previously Presented) The thermoplastic material according to claim 64, wherein the α -olefin is propylene.

66. (Previously Presented) The thermoplastic material according to claim 64, wherein the polyene is a diene selected from: linear (non-)conjugated diolefins; and monocyclic or polycyclic dienes.

67. (Previously Presented) The thermoplastic material according to claim 61, wherein the elastomeric phase has the following composition: 15 mol% to 85 mol% of ethylene; 85 mol% to 15 mol% of an α -olefin; and 0 mol% to 5 mol% of a diene.

68. (Previously Presented) The thermoplastic material according to claim 61, wherein the elastomeric phase comprises an elastomeric copolymer of ethylene and propylene having the following composition: 15% by weight to 80% by weight of ethylene; and 20% by weight to 85% by weight of propylene, with respect to the total weight of the elastomeric phase.

69. (Previously Presented) The thermoplastic material according to claim 68, wherein the elastomeric phase comprises an elastomeric copolymer of ethylene and propylene having the following composition: 20% by weight to 40% by weight of ethylene; and 60% by weight to 80% by weight of propylene, with respect to the total weight of the elastomeric phase.

70. (Previously Presented) Thermoplastic material according to claim 45, wherein in the α -olefin homopolymer or copolymer of (c), the α -olefin is an aliphatic α -olefin of formula $\text{CH}_2=\text{CH}-\text{R}$, wherein R represents a hydrogen atom, a linear or branched alkyl group containing from 1 to 12 carbon atoms; or an aromatic α -olefin of formula $\text{CH}_2=\text{CH}-\text{R}'$, wherein R' represents an aryl group having from 6 to 14 carbon atoms.

71. (Previously Presented) Thermoplastic material according to claim 70, wherein the aliphatic α -olefin is selected from: ethylene, propylene, 1-butene, isobutylene, 1-pentene, 1-hexene, 3-methyl-1-butene, 3-methyl-1-pentene, 4-methyl-1-pentene, 4-methyl-1-hexene, 4,4-dimethyl-1-hexene, 4,4-dimethyl-1-pentene, 4-ethyl-1-hexene, 3-ethyl-1-hexene, 1-octene, 1-decene, 1-dodecene, 1-tetradecene, 1-hexadecene, 1-octadecene, and 1-eicosene, or mixtures thereof.

72. (Previously Presented) The thermoplastic material according to claim 70, wherein the aromatic α -olefin is selected from: styrene, and α -methylstyrene, or mixtures thereof.

73. (Previously Presented) The thermoplastic material according to claim 45, wherein in the α -olefin homopolymer or copolymer (c), the polyene is a conjugated or non-conjugated diene, triene or tetraene.

74. (Previously Presented) The thermoplastic material according to claim 45, wherein the α -olefin homopolymer or copolymer (c) is selected from:

propylene homopolymers or copolymer of propylene with ethylene and/or an α -olefin having 4 to 12 carbon atoms with an overall content of ethylene and/or α -olefin lower than 10% by mole;

ethylene homopolymers or copolymers of ethylene with at least one α -olefin having 4 to 12 carbon atoms;

styrene polymers such as styrene homopolymers;

styrene homopolymers modified with a natural or synthetic elastomer, polybutadiene, polyisoprene, butyl rubber, ethylene/propylene/diene copolymer (EPDM), ethylene/propylene copolymers (EPR), natural rubber, epichloridrin; styrene copolymers, styrene-methylstyrene copolymer, styrene-isoprene copolymers, or styrene-butadiene copolymer; and

copolymers of ethylene with at least one ethylenically unsaturated ester selected from: alkyl acrylates, alkyl methacrylates and vinyl carboxylate, wherein the alkyl group, linear or branched, has 1 to 8 carbon atoms, while the carboxylate group, linear or branched, has 2 to 8 carbon atoms; and wherein the ethylenically unsaturated

ester is generally present in an amount of 0.1% to 80% by weight with respect to the total weight of the copolymer.

75. (Previously Presented) The thermoplastic material according to claim 74, wherein the ethylene, homopolymers or copolymers of ethylene with at least one α -olefin having 4 to 12 carbon atoms are selected from: low density polyethylene (LDPE), medium density polyethylene (MDPE), high density polyethylene (HDPE), linear low density polyethylene (LLDPE), and ultra-low density polyethylene (ULDPE), or mixtures thereof.

76. (Previously Presented) The thermoplastic material according to claim 74, wherein the styrene polymers are: syndiotactic polystyrene, atactic polystyrene, isotactic polystyrene, polybutadiene-modified styrene polymer, styrene-butadiene copolymer, and styrene-isoprene, or mixtures thereof.

77. (Previously Presented) The thermoplastic material according to claim 74, wherein the copolymers of ethylene with at least one α -olefin having 4 to 12 carbon atoms are selected from:

elastomeric copolymers having the following monomer composition: 35 mol%-90 mol% of ethylene; 10 mol%-65 mol% of an aliphatic α -olefin; and 0 mol%-10 mol% of a polyene; and

copolymers having the following monomer composition: 75 mol%-97 mol% of ethylene; 3 mol%-25 mol% of an aliphatic α -olefin; and 0 mol%-5 mol% of a polyene.

78. (Previously Presented) The thermoplastic material according to claim 74, wherein the copolymers of ethylene with at least one ethylenically unsaturated ester are

selected from: ethylene/vinylacetate copolymer (EVA), ethylene/ethylacrylate copolymer (EEA), and ethylene/butylacrylate copolymer (EBA), or mixtures thereof.

79. (Previously Presented) The thermoplastic material according to claim 45, wherein the homopolymer or copolymer (c) is present in an amount not lower than 5% by weight with respect to the total weight of (a) + (b) + (c).

80. (Previously Presented) The thermoplastic material according to claim 79, wherein the homopolymer or copolymer (c) is present in an amount not lower than 10% by weight with respect to the total weight of (a) + (b) + (c).

81. (Previously Presented) The thermoplastic material according to claim 45, further comprising at least one coupling agent (d)

82. (Previously Presented) The thermoplastic material according to claim 81, wherein the coupling agent (d) is selected from: silane compounds containing at least one ethylenic unsaturation and at least one hydrolyzable group; epoxides containing at least one ethylenic unsaturation; monocarboxylic acids, dicarboxylic acids having at least one ethylenic unsaturation, organic titanates, zirconates or aluminates; or derivatives thereof.

83. (Previously Presented) The thermoplastic material according to claim 81, wherein the coupling agent (d) is added in an amount of 0.01% by weight to 10% by weight with respect to 100 parts by weight of (a) + (b) + (c).

84. (Previously Presented) The thermoplastic material according to claim 81, further comprising a radical initiator (e).

85. (Previously Presented) The thermoplastic material according to claim 84, wherein the radical initiator is an organic peroxide selected from: t-butyl perbenzoate, dicumyl peroxide, benzoyl peroxide, di-t-butyl peroxide, or mixtures thereof.

86. (Previously Presented) The thermoplastic material according to claim 84, wherein the radical initiator (e) is present in an amount of 0.01% by weight to 1% by weight, with respect to 100 parts by weight of (a) + (b) + (c).

87. (Previously Presented) A manufactured product comprising a thermoplastic material according to claim 45.

88. (Currently Amended) The manufactured product according to claim 87, wherein said manufactured product is selected from: ~~industrial, sport or safety surfaces; flooring for recreational areas; flooring tiles; sound barriers; shoe soles; automotive floor mats; automotive bumpers; automotive ickey wheel arch liner; pipe or hose materials; roofing materials; and geomembranes.~~